

Amendments to the Claims

Listing of Claims:

Claims 1 - 25 (canceled).

Claim 26 (new). A method for measuring a voltage at a point in a power distribution network, which comprises the steps of:

providing a measuring circuit having a voltage sensor coupled to a current-carrying conductor of the power distribution network and a further-processing configuration connected to the voltage sensor, the further-processing configuration having an output outputting a measured voltage value as an output signal;

correcting the output signal from the measuring circuit into correct measured value in a correction element having a transfer function being inverse to a transfer function of the measuring circuit, the correction element being an electronic filter; and

adjusting the transfer function of the electronic filter to match the transfer function of the measuring circuit.

Claim 27 (new). The method according to claim 26, which further comprises providing a capacitor device as the voltage sensor of the measuring circuit.

Claim 28 (new). The method according to claim 27, which

further comprises forming the capacitor device as a coupling capacitor, formed from the current-carrying conductor of the power distribution network, and an electrode that is DC-isolated from the current-carrying conductor.

Claim 29 (new). The method according to claim 26, which further comprises using an inductive voltage transformer having a primary side connected to the current-carrying conductor, as the voltage sensor.

Claim 30 (new). The method according to claim 29, which further comprises providing the correction element with a switch for optionally bypassing a remainder of the correction element.

Claim 31 (new). The method according to claim 26, wherein in a case where the output signal is an analog output signal, carrying out the correcting step with an analog filter having a PID characteristic as the correction element.

Claim 32 (new). The method according to claim 26, wherein in a case where the output signal is a digital output signal, carrying out the correcting step with a digital filter as the correction element.

Claim 33 (new). The method according to claim 32, which further comprises forming the digital filter with an inverse transfer function being represented by a temporally discrete

transfer function.

Claim 34 (new). The method according to claim 33, which further comprises forming the digital filter such that coefficients of the temporally discrete transfer function can be altered.

Claim 35 (new). The method according to claim 26, which further comprises providing the further-processing configuration with a DC isolating element in an input region.

Claim 36 (new). A measuring apparatus for measuring a voltage at a point in a power distribution network, the measuring apparatus comprising:

a measuring circuit having a voltage sensor coupled to a current-carrying conductor of the power distribution network, and a further-processing configuration connected to said voltage sensor, said further-processing configuration having an output outputting a measured voltage value as an output signal; and

an electronic filter functioning as a correction element and having an output side connected to said measuring circuit, said correction element receiving the output signal from said measuring circuit and outputting a corrected measured value, said correction element having a transfer function being inverse to a transfer function of said measuring

circuit, and it being possible for the transfer function of said correction element to be adjusted to match it to the transfer function of said measuring circuit.

Claim 37 (new). The measuring apparatus according to claim 36, wherein said voltage sensor is a capacitor device.

Claim 38 (new). The measuring apparatus according to claim 37, wherein said capacitor device is a coupling capacitor formed from the current-carrying conductor of the power distribution network and an electrode which is DC-isolated from said current-carrying conductor.

Claim 39 (new). The measuring apparatus according to claim 38, wherein said electrode of said coupling capacitor is a ring electrode surrounding the current-carrying conductor.

Claim 40 (new). The measuring apparatus according to claim 36, wherein said voltage sensor is an inductive voltage transformer having a primary side connected to the current-carrying conductor.

Claim 41 (new). The measuring apparatus according to claim 40, wherein said correction element has a switch for optionally bypassing a remainder of said correction element.

Claim 42 (new). The measuring apparatus according to claim 36, wherein said measuring circuit outputting an analog

output signal as the output signal and said correction element is an analog filter having a PID characteristic.

Claim 43 (new). The measuring apparatus according to claim 36, wherein said measuring circuit outputting a digital output signal as the output signal and said correction element is a digital filter.

Claim 44 (new). The measuring apparatus according to claim 43, wherein the transfer function of said digital filter is a temporally discrete transfer function.

Claim 45 (new). The measuring apparatus according to claim 44, wherein the temporally discrete transfer function of said digital filter has variable coefficients.

Claim 46 (new). The measuring apparatus according to claim 36, wherein said further-processing configuration has an input region and a DC isolating element in said input region.

Claim 47 (new). The measuring apparatus according to claim 46, wherein said DC isolating element is an inductive current transformer.

Claim 48 (new). The measuring apparatus according to claim 47, wherein:

said further-processing configuration has a resistor with a

high resistance value;

said inductive current transformer has a primary winding connected in series with said resistor defining a series circuit; and

said voltage sensor has an output side connected to said series circuit.

Claim 49 (new). The measuring apparatus according to claim 48, wherein:

said further-processing configuration has a negative feedback operational amplifier with an internal resistance of zero ohms; and

said inductive current transformer has a secondary winding loaded by and connected to said negative feedback operational amplifier.

Claim 50 (new). The measuring apparatus according to claim 36, wherein said further-processing configuration has an analog-to-digital converter on said output side.